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What motivates Silicon Valley employees?

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WHAT MOTIVATES SILICON VALLEY EMPLOYEES?

A Thesis

Presented to

The Faculty of the Department of Psychology

San Jose State University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science

by

Kristine E. Germone

December, 1999

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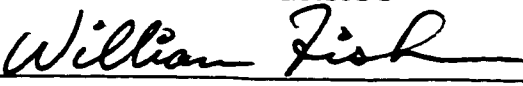
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ABSTRACT

WHAT MOTIVATES SILICON VALLEY EMPLOYEES?

By Kristine E. Germone

The purpose of this study was to examine what motivates employees to do their best work. Motivation in the workplace was addressed by evaluating the needs and values of individuals working at various organizations located in the Silicon Valley area of Northern California. Subjects were 124 participants in evening volleyball leagues who completed a survey addressing the importance of various motivating factors in the workplace.

Results from T-tests and Chi-square statistics analyzing ratings and rankings of the importance of workplace motivators by gender and primary job focus showed no statistical differences between groups. Results from Chi-square statistics showed that participants age 40 and over listed "Guaranteed Income" as a top five motivator significantly more often than participants under age 40. These findings have implications for organizations developing methods to motivate their employees in order to increase job satisfaction, hence increasing retention and reducing turnover.

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What Motivates Silicon Valley Employees?

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Running head: EMPLOYEE MOTIVATION

Footnotes

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Abstract

The purpose of this study was to examine what motivates employees to do their best work. Motivation in the workplace was addressed by evaluating the needs and values of individuals working at various organizations located in the Silicon Valley area of Northern California. Subjects were 124 participants in evening volleyball leagues who completed a survey addressing the importance of various motivating factors in the workplace. Results from t-tests and chi-square statistics analyzing ratings and rankings of the importance of workplace motivators by gender and primary job focus showed no statistical differences between groups. Results from chi-square statistics showed that participants age 40 and over listed "Guaranteed Income" as a top five motivator significantly more often than participants under age 40. These findings have implications for organizations developing methods to motivate their employees in order to increase job satisfaction, hence increasing retention and reducing turnover.

What Motivates Silicon Valley Employees?

It is the nature of organizations to change in order to address new challenges. Some of these organizational challenges include managing new technology, globalization, mergers, downsizing, diversity in the workforce, and reacting to current economics. Currently, the economy in the United States is booming, especially in the Silicon Valley area of Northern California. Company profits and stock values are at all-time highs. Current economics warrant unique organizational challenges, including changes in the job market, changes in the relationship between the employee and employer, and changes in employee attitudes. Reaction to changes in the current economy forces organizations to be creative in identifying and utilizing individual motivating factors in their strategies to attract and retain employees. The purpose of this study is to survey a representative sample of Silicon Valley employees in order to determine their current motivational factors in the workplace by analyzing their needs and values. This research will bring to light information that will assist employers in understanding and hence retaining their most valuable business asset – their employees.

Economic Changes

Due to imminent change in the economy, the job market has changed significantly in recent years, especially in companies located in the Silicon Valley area of Northern California. One impact of the strong economy is that companies are making record profits; therefore, they need to keep up with industry demand by growing and expanding their employee base. Organizational growth creates an increase in the number of jobs

available. This increase in job availability combined with a limited pool of skilled workers creates a very competitive job market.

Silicon Valley is currently facing this very competitive job market. "Unemployment is at a 30-year low and starting salaries and wages for jobs involving computers and the Internet are amazingly high" (Chapman, 1999, p. 6). This competitive job market gives employees the upper hand in the employment arena. Employees are able to pick and choose their jobs with relative ease. "What's different now, compared to the '80s, is that the companies don't necessarily hold the upper hand" (Epperheimer, 1999, On-line). The intense job market in the Silicon Valley has created an arena where employees have the luxury of selecting jobs that provide the best fit with their career goals.

In addition to changes in the job market, companies are experiencing a change in the relationship between the employee and the employer; employee expectations have evolved with the times. "Employee loyalty - a casualty of the transition from an industrial age to an information society - is dead . . . a new U.S. workforce has emerged and it is more independent, educated, entrepreneurial, diverse and wary than ever" (Stum, 1998, p. S9). The old "social contract" between employer and employee has become a casualty; a new "mutual commitment contract" seems to have surfaced, which places employers and employees on a more equal playing field (Stum, 1998). The entire employee and employer relationship has evolved into a partnership-based situation, which has forced organizations to adapt; employees have replaced loyalty to a company with loyalty to themselves.

The competitive labor market has forced organizations to face changes in employee attitudes. Workers are in high demand, creating a social acceptance for frequent job-changes (Herman, 1998). "Job-hopping and the new ethic of being your own 'brand', a feature of the extreme individualism of high-tech culture", has led to employees searching for other employment if they are not happy working with their current employer (Chapman, 1999, p. 6). "The average length of stay at a single job in Silicon Valley is a mere 18 months" (Chapman, 1999, p. 6). Organizations are finding employees will not tolerate an environment that does not satisfy their personal goals or expectations; individuals will not hesitate in searching for new employment.

Organizations React to Economic Changes

Due to current economic changes, employers are focusing on how to attract and retain their most valuable asset: their employees. "Employers who want to attract, optimize and hold onto valuable employees will have to do so strategically. Their efforts must be deliberate, well thought out and focused" (Herman, 1998, p.51). To recruit, hire and train a new employee can cost employers a minimum of \$6,000 to \$8,000 per employee, according to a study prepared by the A.T. Kearney consulting group for Joint Venture (Schwanhausser, 1999). "That figure is based on hiring costs, lost productivity while jobs remain open, and turnover of 20% to 25% a year" (Schwanhausser, 1999, On-line). The cost of recruiting a new employee is up to 42 percent more than retaining a trained employee (McCord, 1998). Attracting and retaining employees becomes a key function for organizations in a tight job market, as the cost to recruit, hire and train, as well as the cost of lost productivity, is very high.

Organizations are reviewing and updating their company incentive programs and benefit packages due to the current impact economic changes have on the job market. Non-traditional perquisites are being implemented in order for organizations to remain competitive in a tight job market; companies are trying to reduce job-hopping by offering competitive benefit options. "To stimulate and encourage top performance, growth and loyalty, both employees and employers are looking for something more" (Davidson, 1997, p. S4). Employees are no longer satisfied with a standard benefit package; employees have been able to request or even require benefits and perks previously unattainable or unfeasible. "Traditional pay programs are becoming less effective for high-performing, committed employees. Pay has become a given - an expected reward for coming to work" (Davidson, 1997, p. S4).

According to the Society of Human Resources Managers (SHRM) 1999 Benefits Survey, "employers are increasing their employee benefits packages in response to record low unemployment rates and a tight job market" (1999, On-line). Employers have increased their willingness to offer such things as: "alternative scheduling options, a child-friendly atmosphere, prescription programs, retiree benefits, flexible spending accounts, wellness and fitness programs, and casual dress policies" (SHRM, 1999, On-line). Other employers offer fitness center subsidies, weight loss programs, stress reduction programs, massage therapy and nap time during the workday (SHRM, 1999). In response to employee demands and expectations in a competitive job market, many companies are choosing to offer non-traditional benefit options.

Employers are also recognizing the importance of using "out-of-the box" thinking efforts to create benefits that help keep employees focused on their jobs. "Employees less distracted by those other things in their lives are able to be more focused on their jobs", according to Chuck Sukovaty, director of the benefits group at American Compensation Association (Corbett, 1999, p. AZ13). Motorola provides one example of cutting-edge benefit options by providing errand-runners for workers; these errand-runners assist workers by shopping, running to the dry cleaners, or walking a dog (Corbett, 1999). Creative benefits that allow employees to stay focused on their jobs are quickly becoming standard benefit options in organizations wanting to remain cutting-edge in a competitive job market.

Motivation and Job Satisfaction

The current booming economy, the competitive job market, and the change in expectations and attitudes have all created an array of challenges, which impact employee workplace needs and values. Employees in Silicon Valley are searching for and expecting an entirely new set of benefits and challenges to keep them at their current jobs. Employee retention is key to minimizing staffing costs. One theory to increase and steadily hold employee retention at high levels is to tap into and improve employee job satisfaction. One consistent research finding is the "negative relationship between job satisfaction and job turnover; dissatisfied workers are more likely to quit" (Churchill, Ford, & Walker, 1976, p. 323). "Job satisfaction depends not only on the nature of the job but on the expectations that individuals have of what their job should provide" (Merchant, 1988, p. 43).

To establish what will increase job satisfaction, it is important to look at individual motivational values. "Companies who provide for the wants of their employees will attract and keep good people: productive people committed to making lasting, valuable contributions" (Herman, 1991, p. 45). The indefinite number of opportunities in Silicon Valley warrant companies to consider employee needs and values as factors of motivation in an attempt to increase workers' job satisfaction.

Determining what needs and values motivate employees is no simple task. An employee's job satisfaction is "a product of many different variables operating on the employee" (DeSantis & Durst, 1996, p. 328). Past studies have concluded "all employees have some of the same needs, such as involvement within the organization, knowledge and wholeness of their job, guidance, and an understanding of the particular organization's goals." (Merchant, 1988, p. 44).

Other studies have determined that employees also have differing needs. Difficulties arise in determining employees' motivational factors because needs and values are different for each individual. "Value fulfillment, rather than an individual's expectations, is the key to job satisfaction. When the job fulfills what one values, satisfaction occurs" (Merchant, 1988, p. 43). The needs and values of each employee are almost as unique as each individual; therefore determining these needs and values as factors of motivation is no simple task.

Once employee needs and values are identified as motivational factors, then employers can attempt to incorporate these factors into the workplace environment. This process will have a tendency to make employees happier and more satisfied in their jobs,

and therefore will keep them longer at their current companies. “When needs are met, when employees are getting what they want from their supervisors and their organization, they are more satisfied and more likely to remain in that motivational environment” (Herman, 1991, p. 45). Companies who consider employee needs and values as factors of motivation in their organizational structure will keep employees longer; and therefore increase employee retention.

Theories of Motivation

Motivation refers to the “arousal, direction, and persistence of behavior” (L. Berry, 1998, p. 234). In 1938, Henry Murray identified the need theory of motivation by classifying some of the more reputable, previously identified human instincts as those learned instead of inherited; Murray named these elements “needs” (L. Berry, 1998). Once categorized as needs, many individuals developed need theories in an attempt to further explain the basis for individual motivational factors. One of the most commonly cited motivational need theories is the one developed by Abraham Maslow.

Maslow’s Theory of Motivation

There are various need theories of motivation; one of the earliest and most commonly cited theories is Maslow’s Hierarchy of Needs (Maslow, 1970). The need theory developed by Maslow focuses primarily on the contents of motivational structure (L. Berry, 1998). Abraham Maslow suggests that human needs can be classified into five need levels and arranged into a pyramidal hierarchy of importance (L. Berry, 1998). According to the theory, an individual strives to satisfy each level in the hierarchy before moving up to the next level (L. Berry, 1998).

Maslow contends the first level of needs an individual strives to satisfy are the Physiological needs; those needs are typically considered basic survival and biological functions, such as food, shelter, air, thirst, and reproduction (L. Berry, 1998). The next levels of needs are those of Security; needs that satisfy physical safety and emotional security issues. Love/belongingness needs are the next level (L. Berry, 1998). These needs address the issue of love, affection, and the desire to be appreciated and accepted by friends and peers (L. Berry, 1998). The Esteem category of needs satisfies the need for self-confidence, self-respect, recognition and respect from others (L. Berry, 1998). The top level of the hierarchy is the category of Self-Actualization needs (L. Berry, 1998). These involve the need for each individual to reach his or her potential for continued personal growth and self-fulfillment (L. Berry, 1998).

According to Maslow, an individual will attempt to satisfy his or her Physiological needs first (L. Berry, 1998). Once this is accomplished, an individual has new primary motivators, which fall into the category of Security needs (L. Berry, 1998). Security needs will attempt to be satisfied, and then an individual will move into the next category until the individual reaches the highest level of motivation - that of Self-Actualization (L. Berry, 1998). Not all individuals reach the Self-Actualization level. It is important to point out that a person's needs may overlap into different categories, and an individual is not necessarily continuously moving up in the levels of the hierarchy. When circumstances change in an individual's life, so may an individual's current level of needs.

Although various researchers, in addition to Maslow, have developed need theories on motivation, the primary focus of this paper will be to utilize Maslow's theory because the original research being analyzed used Maslow's principles as the backbone of the study.

Maslow's Theory into Practice

One early attempt to use Maslow's Need Theory to explain motivation was in a study conducted by Dick Berry and Ken Abrahamsen (1981). This study used Maslow's Hierarchy of Needs theory to classify and categorize motivational elements of salespeople. The purpose of the study was to develop a framework of motivational factors based on Maslow's Hierarchy of Needs that sales agents could use to better manage their workforce of salespeople and to build a motivational climate which would create a team of high-performing individuals, performing to capacity (D. Berry & Abrahamsen, 1981).

The study asked respondents to select 10 statements from a list of 45 work-life situations that were considered most important in motivating them to do their best work. Results suggested a strong preference for situations allowing salesmen the opportunity to learn, grow, and achieve a sense of personal accomplishment in positions where they are respected and trusted to perform on their own initiative. "Being trusted to do my job the way I think it should be done" was the most chosen motivational statement selected by 86% of the salesmen, which was followed by the statement, "the personal satisfaction of a job well done" selected by 80% of the salesmen (D. Berry & Abrahamsen, 1981, p. 212).

The majority of the top 10 statements selected by salesmen as being most important in motivating them to do their best work were in the Self-Actualization category, followed by the Self-Esteem category. Results are presented in Table 1. Implications are that salesmen are most motivated by statements representing elements of the Self-Actualization category, such as job challenge, personal satisfaction, personal growth, and self-improvement.

Study conclusions suggested a universal motivator as “being trusted to do my job the way I think it should be done”, as this statement had the highest response rate at 86%. The findings from this study serve as a foundation to apply to current behavioral principles; they serve as a framework to identify needs and values of salesmen. While the results identify an important starting place, there was many aspects not taken into consideration.

Elements Lacking and Supporting Research

Although the study showed value when it was conducted because it was able to tap into the pulse of motivational elements of salesmen in 1981, the study lacked statistical analysis in a few areas. The original study failed to take into consideration factors such as differences in age, gender, or occupation as contributors to different motivational needs. Additionally, because a significant amount of time has passed since the initial research was conducted in 1981, the study may be dated. Current industry trends play a large part in motivation of the modern day workforce. The following discussion attempts to identify and explain the importance of elements not analyzed in research by D. Berry and Abrahamsen.

Table 1

Statements Selected as Top 10 Motivators by Salesmen in 1981

Statement	Motivational Need Category	Percentage Selected
Being trusted to do my job the way I think it should be done.	Self Esteem	86
The personal satisfaction of a job well done.	Self-Actualization	80
Knowing that other people respect me and my work.	Self Esteem	74
Being able to learn and grow in my work.	Self-Actualization	66
Having the opportunity for self-improvement.	Self-Actualization	63
Having the opportunity to express myself fully & creatively.	Self-Actualization	57
Being a position to contribute new ideas.	Self-Actualization	54
Having an opportunity for personal growth.	Self-Actualization	54
Working with other people.	Love-Belonging	51
Being able to express my full potential	Self-Actualization	40

Age of participants was not taken into consideration. Because the workforce incorporates a variety of individuals at different ages, analyzing data by age group has the potential to produce significant results. Analysis of different age groups of individuals has created well-documented classifications of individuals into generation categories that are based on needs and values. Each generation has different values and ideas of what is important (Nelson, 1999).

Younger workers, those born between 1964 and 1981, represent over 40 million-plus employees, accounting for 26 percent of the workforce (Nelson, 1999). This group of individuals, referred to as "Generation X", seems to exhibit values, goals, and ideals that are different from their parents and prior generations (Griffin, 1999). This group of individuals is often "stereotyped as being less devoted to long-term career prospects and less willing to accept a corporate mindset that stresses conformity and uniformity" (Griffin, 1999, p. 56). They are the generation of "fiercely independent, self-directed, and resourceful individuals" who are skeptical of authority and institutions (Nelson, 1999, p. A6). These "Generation Xers" seek organizations that offer work that is purposeful and an environment that is exciting, challenging and meaningful, with an abundance of learning opportunities (Nelson, 1999).

In comparison to the "Generation Xers", older workers have some striking differences in their needs and values, therefore their workplace attitude and expectations are different. This category of older workers includes those individuals classified as "Baby Boomers", which account for about 52% of the workforce and the "Silent Generation", which account for about 21% of the workforce (Nelson, 1999). "Baby Boomers" consist

of those individuals born between 1945 and 1963, while the "Silent Generation" consists of those individuals born between 1920 and 1945 (Nelson, 1999). Individuals in these generations "like to win, to be in charge and to make an impact"; they also value formal recognition (Nelson, 1999, p. A4). Quite a few of these individuals have mature family obligations and are currently having to make decisions regarding retirement, where having a guaranteed income is valued (Nelson, 1999). Many of these older individuals have a stronger tendency to exhibit loyalty to their company than younger workers, and in return they desire flexibility and a work/life balance (Nelson, 1999).

Taking into account current information regarding the "Generation X" individuals as compared to the rest of the workforce, research shows that younger workers will have significantly different needs and values than older workers. Younger individuals seem to value Self-Actualization-type motivational factors such as job challenge, personal satisfaction and trust to do their jobs. Older workers tend to value other motivational factors, such as having an impact, guaranteed income, flexible hours and family time. From current information, it can be theorized that younger individuals will be more motivated by Self-Actualization factors, including, specifically, the personal satisfaction of a job well done. Younger workers are also not as motivated by job security and a guaranteed income as are older workers; they understand their skills are transferable to other jobs. Older workers may have the sense that they will not be able to transfer their skill sets to another company as easily as younger workers, so they value their job security and a guaranteed income. Older workers also value flexible hours that enable them to balance their work and family obligations.

This group of "Generation X" workers represents an increasing percentage of workers and therefore creates a need to for companies to research the motivational needs of different ages of employees. Realizing each generation of employees has different values and ideas of what is important will create a workforce structure aimed at meeting the diverse needs of all employees (Nelson, 1999). If the values, goals and ideals of "Generation X" have significantly changed from prior generations, then they may also have significant changes and differences in their motivational needs. These potential changes indicate a need for further study of motivational needs of various age groups.

Another element not taken into consideration in this study was gender differences. Statistics gathered by the U.S. Census Data Board show that women are entering the workforce at increasing speed. In 1964, the reported percentage of males in the workplace was 66%, while women only represented 34% of workers (Griffin, 1999). In 1994, data revealed that 54% of the workforce was male and 46% was female (Griffin, 1999). In the United States, the anticipated ratio of males and females in the workplace in the year 2000 is 52% male and 48% female (Griffin, 1999).

As the statistics show, females are anticipated to make up almost half of U.S. workers within the next year. This trend has generated interest in the relationship between gender and motivational factors. Traditional motivation techniques used on males may not have the same motivational influence for females. Significant growth in the number of women in the workforce begs for additional research of female motivational needs in comparison to male needs, in order for companies to attempt to satisfy both genders.

Women in the workplace add an element of variety to the climate of organizations. This dynamic element needs to be taken into consideration when analyzing motivational needs of men and women. Traditional programs and incentives based primarily on the values and needs of men may not be motivational for women. Kafka found one example of motivational differences between men and women in 1986. Kafka's research showed that the greatest motivational needs for men are control and economic security, while the greatest motivational needs for women are control and personal self-worth. While control for both genders is an important motivational need, men value financial security more than women do; women value personal self-worth more than men do. In another study, males were found to have an orientation toward intrinsic work values, such as task autonomy; females had an orientation toward social work values, such as friendly and supportive supervisors (Mottaz, 1986).

Based on past research, conclusions drawn would suggest different motivational needs for men and women. According to Maslow's theory, women would primarily be motivated by elements in the Love-Belonging category, while men would not be primarily motivated by elements in the Love-Belonging category. Results from this study show that gender differences play a role in the basic motivational needs and values of individuals. Additional studies may further examine these gender differences.

Because the focus of the study by D. Berry and Abrahamsen was on salesmen, the study did not take into account the possibility of motivational differences between various occupations. A variety of occupations make up the world; different motivational factors may influence individuals that are in differing occupations. A study analyzing the

motivational factors of people in different occupations may have significant value for many organizations. Taking into consideration the occupational breakdown of workers in Silicon Valley, many jobs are in the Information Technology area. Specifically, many of the occupations of workers in the Silicon Valley can be described as having computers as their primary focus.

In a study of the motivational factors of different occupations, specifically focusing on individuals in the Information Technology (IT) field, the item selected as most motivational was the opportunity to learn and use new technology skills (Research Institute of America Group, 1998). The most selected statements included the chance to work on the latest technology, being able to work on a mixture of technology development and maintenance, and the ability to start and finish projects ("Research", 1998). Based on this research, the primary motivator for Information Technology workers was found to be the challenge of learning new technology ("Research", 1998). Results show IT professionals would be primarily motivated by factors that tend to be Self-Actualizing. The challenge of learning new technology is an element that needs additional research to confirm its relevance to other occupations, or to determine if it is relevant only to those individuals in the IT field.

Current Trends

D. Berry and Abrahamsen conducted their study in 1981. It has been 18 years since the original data was collected; therefore their conclusions may be dated. Times are changing, especially with the opportunities the computer and the Internet have opened up. The Information Age has enabled the expanded use of the Internet and has opened up

unlimited opportunities for individuals to access information. "Business is going to change more in the next ten years than it has in the last fifty . . . These changes will occur because of the disarmingly simple idea: the flow of digital information" (Gates & Hemingway, 1999, p. xiii). Unemployment is at a 30-year low (Chapman, 1999) and there is a labor shortage that has become critical in nature (Herman, 1998). People are changing; needs and values of people are changing. The "one size fits all" mentality no longer can encompass the "diverse needs and desires of today's multigenerational workplace" (Nelson, 1999, p. A3). It is important to replicate the study with individuals who are in the workforce as it rolls into the new millennium in order to tap into the current pulse of the workforce.

D. Berry and Abrahamsen used a nationwide sample for their data collection. The flurry of activity in Silicon Valley leads one to question the motivation factors of workers in the middle of this flurry. Do low unemployment rates impact motivational needs for workers? Does the competitive job market change the traditionally common needs and values of these workers? For this reason, this study will focus on individuals employed at companies located in the Silicon Valley area of Northern California.

Purpose and Hypotheses

The purpose of this study is to conduct a replication and extension of D. Berry and Abrahamsen's study. The basic framework used in 1981 was sound and provides value to replicate, but there are additional factors subsequent research has shown important that the study did not take into consideration.

Needs and values as functions of motivational factors are not only different for each individual, but also change over time. The focus of this study will be to examine the motivational values and needs of the modern day workforce, as categorized into a structural hierarchy created by Maslow. The overall goal of the study is to compare the workplace motivational needs and values of employees in 1981 and the motivational needs and values of Silicon Valley employees in 1999. In addition to comparing study results of workplace motivational needs and values of employees in 1981 with employees in 1999, this study will also examine possible differences in motivating factors among different groups of people.

The specific hypotheses to be investigated are as follows:

- 1. Younger workers will give higher ratings of importance than will older workers to statements in the Self-Actualization category and will choose more of the Self-Actualization statements in their list of top five motivating factors.**
- 2. Younger workers will choose the Self-Actualization statement: "Having the personal satisfaction of a job well done" as one of their top five motivating factors more often than will older workers and will give this statement higher ratings of importance.**
- 3. Older workers will choose the Safety-Security statement "Having a guaranteed income" as one of their top five motivating factors more often than will younger workers and will give this statement higher ratings of importance.**

4. Women will give higher ratings of importance than will men to the statements in the Love-Belonging category of Maslow's hierarchy of needs and will include more of the Love-Belonging statements in their lists of the top five motivating factors.
5. Participants whose primary job focus is computer-related will give higher ratings of importance than will participants whose primary job focus is not computer-related to statements in the Self-Actualization category and will include more of the Self-Actualization statements in their list of top five motivating factors.

The results of this study will have implications for organizations developing methods to motivate their employees in order to increase job satisfaction, hence increasing retention and reducing turnover.

Method

Participants

This study consisted of 124 participants in weekday evening volleyball leagues occurring in high school gyms located in the Silicon Valley area of Northern California. All subjects were over the age of 18 and employed at businesses and schools within the Silicon Valley area. These individuals were selected to participate in this study due to their age and gender differences as well as their diverse ethnic and occupational backgrounds; the author felt these individuals would be a representative sample of Silicon Valley employees. Survey participation was on a voluntary basis with no compensation for an individual's involvement. Subjects were treated in accordance with the Human Subjects-Institutional Review Board's regulations of San Jose State University.

Approximately 230 surveys were distributed; 124 surveys were used for data analysis, for a response rate of 63.9%. Descriptive statistics of participants are presented in Table 2. There were an equal number of women and men participating in the survey; 62 (50.0%) of the subjects were female and 62 (50.0%) of the subjects were male. The mean age of participants was 34.5 with a standard deviation of 7.3. The minimum age of participants was 23 years old and the maximum age was 56 years old. Ninety-six (77.4%) of the participants were under 40 years of age and 28 (22.6%) of the participants were age 40 and over. The occupational breakdown of study participants included 54 (43.9%) whose primary job function was computer-related and 69 (56.1%) whose primary job function was not computer-related.

Additional demographic data gathered from participants included ethnic background, level of education, and how long participants have worked at their current companies. Seventy-five (62.0%) of the participants were Caucasian, and 32 (26.4%) were Asian/Asian-American. The remaining 14 (11.6%) participants who answered this question classified their ethnic background into other ethnic categories. As for level of education, 30 (24.2%) participants completed their education prior to attaining a Bachelor's degree, while 50 (40.3%) have attained a Bachelor's degree and 44 (35.5%) of the participants completed education higher than a Bachelor's degree. The number of years the participants have worked at their current companies fell into the following categories: 40 (32.5%) at two years or less, 29 (23.6%) between two and four years, 30 (24.4%) between four and eight years, and 24 (19.5%) have worked eight or more years at their current companies.

Table 2

Demographic Characteristics of Participants

<u>Demographic Variable</u>	<u>N</u>	<u>%</u>
Gender		
Male	62	50.0%
Female	62	50.0%
Age		
< 40	96	77.4%
Forty +	28	22.6%
Primary Job Function		
Computer-Related	54	43.9%
Non-Computer Related	69	56.1%
Ethnic Background		
Caucasian	75	62.0%
Asian/Asian American	32	26.4%
Other	14	11.6%
Highest Level of Education Attained		
Less than Bachelor's Degree	30	24.2%
Bachelor's Degree	50	40.3%
Higher than Bachelor's Degree	44	35.5%
Years at Current Company		
< 2	40	32.5%
2 - 4	29	23.6%
4 - 8	30	24.4%
8 +	24	19.5%

Instrument

A survey was used to assess participants' motivation to do their best work in the workplace environment. The survey employed was a modification of the one developed by D. Berry and Abrahamsen (1981), which addressed motivational factors in the workplace. The survey included 45 statements in which participants were asked to rate each statement on its motivational importance to them doing their best work (see Table 3). Participants rated each statement on a scale of 1 to 6, with 1 representing "Not at all Important" and 6 representing "Extremely Important."

The 45 statements on the survey were broken down into sub-scales consisting of five categories, which represented the five categories of Maslow's Hierarchy of Needs. These five sub-group categories are identified as follows: Physiological, Safety-Security, Love-Belonging, Self-Esteem, and Self-Actualization. Each of the five sub-scales includes nine statements, which represent relevant concepts of Maslow's Needs Hierarchy. For example, the first statement on the survey ("Job security") is classified into the Safety-Security category because the statement represents an element within the Safety-Security level of needs, as defined by Maslow. This survey format used was one developed by D. Berry and Abrahamsen for their data analysis used in 1981. Participants' ratings of the importance of statements within each category are used to determine the underlying factors that motivate individuals to do their best work.

There were also 10 demographic questions included on the survey requesting information such as gender, age, occupation, ethnic background, level of education, and

number of years participants have worked at their current companies. Copies of the cover letter and survey are located in Appendix A.

Procedure

All individuals at the practice night of their volleyball league were gathered and asked to fill out and complete the survey instrument. Copies of the cover letter, survey and writing utensils were handed out to team captains, who were requested to distribute the materials to their individual team members. A cover letter stating the purpose of the study as well as survey instructions were included with the survey. No time limit was placed on subjects; participants were asked to place completed surveys in a box before the three-hour practice had ended for the evening. The author of this study collected all data.

Results

Descriptive Statistics

The statements most frequently chosen as one of the top five statements that motivate participants to do their best work are presented in Table 3. The statement "Having a job which allows me time with my family" was selected most often by participants (34%) as one of their top five motivators; this statement falls into the Love-Belonging category of Maslow's Hierarchy of Needs. The statements "Having other people respect me and my work" (26%) and "Being able to learn and grow in my work" (26%) were selected as the second most motivating factors; these statements respectively fall into the Self-Esteem and Self-Actualization categories of Maslow's Hierarchy.

Table 3

Statements Selected as Top 5 Motivators in 1999

Statement	Motivational Need Category	Percentage Selected
Having a job which allows me time with my family.	Love-Belonging	34
Having other people respect me and my work.	Self Esteem	26
Being able to learn and grow in my work.	Self-Actualization	26
Having the personal satisfaction of a job well done.	Self-Actualization	25
Being trusted to do my job the way I think it should be done.	Self Esteem	25
Having new and exciting job challenges.	Self-Actualization	24
Working with people I like and respect.	Love-Belonging	22
Being rewarded for performance	Self-Esteem	22
Having an opportunity for personal growth.	Self-Actualization	20
Doing something meaningful with my life.	Self-Actualization	20
Being able to support children I have and/or may have in the future.	Physiological	20

An interesting result to note is the concept of the statement selected most often as a top five motivator by participants. "Having a job which allows me time with my family" has no relevance to the structure of the job itself or the company, but rather relates to the quality of an individual's free time. This result may be explained by the shift in quality of life of the workforce today; individuals are concerned about having a balanced life where outside interests are just as important as their jobs (Lankard, 1995). While the majority of the top motivating statements chosen related to the structure of the job itself, having the opportunity to spend time with family is very important to the majority of participants in this study.

Means and standard deviations for all statements listed by appropriate category of Maslow's Hierarchy of Needs are included in Table 4. Overall, the highest rated categories (as measured by calculating the mean of the nine statements within each category) were Self-Actualization ($\bar{M} = 5.0$, $SD = .66$), Self-Esteem ($\bar{M} = 4.5$, $SD = .62$) and Safety-Security ($\bar{M} = 4.5$, $SD = .87$).

The individual statements rated as the most important in motivating individuals to do their best work were: "Having money to buy enough food to eat each day" ($\bar{M} = 5.3$, $SD = 1.20$), "Being trusted to do my job the way I think it should be done" ($\bar{M} = 5.2$, $SD = .76$), "Having the personal satisfaction of a job well done" ($\bar{M} = 5.2$, $SD = .79$), "Having an opportunity for personal growth" ($\bar{M} = 5.2$, $SD = .83$), "Having other people respect me and my work" ($\bar{M} = 5.2$, $SD = .86$), and "Being rewarded for my performance" ($\bar{M} = 5.2$, $SD = .86$).

Table 4

Means, Standard Deviations of Motivational Statements

Statement categorized by Maslow's Hierarchy of Needs	<u>M</u>	SD
1. Physiological		
Having money to buy enough food to eat each day	5.3	1.20
Being able to afford a place to live	5.1	1.18
Being treated fairly by other people	5.0	1.01
Being able to support children I have and/or may have in the future	4.8	1.54
Having personal comfort in my working environment	4.5	1.09
Being able to afford decent clothing	3.9	1.55
Being able to avoid working overtime or on weekends	3.7	1.54
Being able to take breaks and have food available	3.3	1.44
Developing and/or maintaining romantic relationships	2.9	1.98
Average	4.3	.82
2. Safety-Security		
Knowing what is expected of me in my work	5.0	.88
Having insurance or other benefits	4.7	1.36
Having protection from personal danger	4.7	1.40
Having a healthful working environment	4.6	1.23
Having steady work	4.5	1.21
Job security	4.4	1.27
Having a guaranteed income	4.4	1.40
Knowing that I will always have a job	4.1	1.48
Having co-workers look out for my interests	3.9	1.21
Average	4.5	.87

Table 4 (con't)

Statement categorized by Maslow's Hierarchy of Needs	<u>M</u>	SD
3. Love-Belonging		
Working with people I like and respect	4.9	1.04
Having a job which allows me time with my family	4.9	1.27
Working with other people	4.6	1.12
Being accepted as a work group or team	4.4	1.16
Participating in work group conversations	4.2	1.10
Socializing with my friends	3.8	1.36
Involving other people in what I do	3.7	1.21
Being involved with co-workers in social and recreational activities	3.3	1.32
Having opportunities to participate in work-related social activities	3.0	1.34
Average	4.0	.71
4. Self-Esteem		
Being trusted to do my job the way I think it should be done	5.2	.76
Being rewarded for my performance	5.2	.86
Having other people respect me and my work	5.2	.86
Being given new, interesting job assignments	4.8	1.10
Being considered for advancement	4.8	1.10
Having others recognize the importance of my job	4.4	1.12
Having a superior tell me when I've done a good job	4.4	1.22
Having a position of authority	3.5	1.35
Not having to be accountable to other people	3.1	1.34
Average	4.5	.62

Table 4 (con't)

Statement categorized by Maslow's Hierarchy of Needs	<u>M</u>	SD
5. Self-Actualization		
Having the personal satisfaction of a job well done	5.2	.79
Having an opportunity for personal growth	5.2	.83
Being able to learn and grow in my work	5.1	.87
Doing something meaningful with my life	5.1	.95
Having the opportunity for self-improvement	5.0	1.03
Having new and exciting job challenges	4.9	.95
Being in a position to contribute new ideas	4.9	.99
Being able to express my full potential	4.9	.99
Having the opportunity to express myself fully and creatively	4.8	1.02
Average	5.0	.66

A striking trend is the amount of variability, as seen in the standard deviations, in the statements in the “lower” level categories compared to those statements in the “higher” level categories. For example, the statement regarding having money to buy enough food is in the Physiological category and has a high standard deviation of 1.20. Statements in other categories, such as Self-Esteem or Self-Actualization, have much lower standard deviations (ranging from .76 to .86). Participants’ responses were much more similar with less variability when selecting statements in the two highest categories: Self-Esteem and Self-Actualization.

This trend of less variability within the higher need categories may be explained by the original theory itself, as defined by Maslow. Individuals are at different levels of needs at different points in their lives. Those individuals still in the Physiological need category will be highly motivated by statements in that category, while individuals at higher levels of the needs hierarchy will have a tendency to rate statements in the lower categories lower. This may account for the higher variance in the responses in the lower categories; some individuals may still be in these categories and may rate these statements as more important, while other individuals may be at higher levels of the hierarchy and may rate statements in the lower categories as less important. Results show those individuals motivated by elements in the higher categories have a tendency to be more homogeneous in their ratings of the statements in the higher categories. They rate the same issues as important, in effect causing less variance in the responses.

It is also interesting to note that although the majority of the statements with the highest overall means are in the Self-Actualization category at Maslow’s highest level,

the statement with the overall highest mean is in the Physiological category; this is the lowest, most basic level in the Hierarchy of Needs. One explanation for this finding may be the underlying assumption that having money to buy enough food to eat each day is an ultimate survival need, no matter what motivates individuals to perform their best work.

Tests of Hypotheses

In order to test the first hypothesis, an unpaired t-test was performed to determine if younger workers gave higher ratings of importance than did older workers to statements in the Self-Actualization category. The independent variable was age: participants who were younger than age 40 and participants age 40 and over. The dependent variable used was the mean of the ratings given to the nine statements in the Self-Actualization category. Although participants younger than age 40 ($M = 5.1$, $SD = .60$) rated statements in the Self-Actualization category slightly higher than did participants age 40 and over ($M = 4.8$, $SD = .81$), the difference was non-significant, $t(122) = 1.69$, $p = .09$.

Another unpaired t-test was performed to determine if younger workers selected Self-Actualization statements in their list of top five motivators more often than did older workers. The independent variable was age: participants who were younger than age 40 and participants age 40 and over. The dependent variable used was the number of Self-Actualization statements included in each participant's list of top five motivators. Results were non-significant, $t(108) = .92$, $p = .36$. However, participants younger than age 40 ($M = 1.7$, $SD = 1.33$) included more Self-Actualization statements in their lists of top five motivators than did participants age 40 and over ($M = 1.4$, $SD = 1.38$).

In order to test the second hypothesis, chi-square statistics were used to determine if younger workers chose the Self-Actualization statement: "Having the personal satisfaction of a job well done" as one of their top five motivating factors more often than did older workers. Of the workers under the age of 40, 27.6% chose "Having the personal satisfaction of a job well done" as one of their top five motivating factors, while 13.0% of participants age 40 and over chose the same factor. Results were not significant, $\chi^2(1) = 2.08$, $p = .15$ (see Table 5), however, younger workers did choose "Having the personal satisfaction of a job well done" as one of their top five motivating factors more often than did older workers.

An unpaired t-test was also performed to determine if younger workers gave higher ratings of importance than older workers to the statement "Having the personal satisfaction of a job well done." The independent variable was age: participants who were younger than age 40 and participants age 40 and over. The dependent variable used was the mean of the ratings given to the statement "Having the personal satisfaction of a job well done." Results were non-significant, $t(122) = 1.72$, $p = .09$. However, participants younger than age 40 ($M = 5.3$, $SD = .71$) rated the statement "Having the personal satisfaction of a job well done" slightly higher than did participants age 40 and over ($M = 5.0$, $SD = 1.02$).

To test the hypothesis that older workers chose the Safety-Security statement "Having a guaranteed income" as one of their top five motivating factors more often than did younger workers, chi-square statistics were computed. Of the participants age 40 and over, 21.7% chose guaranteed income as one of their top five motivating factors, while

Table 5

Participants Who Chose Personal Satisfaction as a Top Five Motivator by Age Group

Variable		Age Group		Total
		Under 40	40+	
Selected "Having the personal satisfaction of a job well done" as one of the top five motivators	Yes	24 (27.6%)	3 (13.0%)	27 (24.5%)
	No	63 (72.4%)	20 (87.0%)	83 (75.5%)
	Total	87 (100.0%)	23 (100.0%)	110 (100.0%)

$$\chi^2(1) = 2.08, p = .15$$

5.8% of participants under age 40 chose this factor. Results were significant, $\chi^2(1) = 5.63$, $p = .02$ (see Table 6). Older workers chose "Having a guaranteed income" as one of their top five motivating factors significantly more often than did younger workers.

An unpaired t-test was also performed to determine if older workers gave higher ratings of importance than younger workers to the statement "Having a guaranteed income." The independent variable was age: participants who were younger than age 40 and participants age 40 and over. The dependent variable used was the mean of the ratings given to the statement "Having a guaranteed income." Results were non-significant, $t(122) = .26$, $p = .79$.

As seen from the above analysis performed, results were not consistent when using two different tests to compare the ratings of older and younger participants with the statement "Having a guaranteed income." Both groups of participants rated the statement "Having a guaranteed income" similarly on the 1-6 rating scale, hence comparisons here were non-significant. Significance was found between the two groups of participants when asked if "Having a guaranteed income" was one of their top five motivators. When asked to select their five most motivating factors, participants age 40 and over selected "Having a guaranteed income" significantly more often than those participants under the age of 40. This result may be explained by the concept that while a guaranteed income is similarly important to both older and younger individuals, guaranteed income is not one of the most important motivating factors for those younger individuals.

An unpaired t-test was performed to determine if women gave higher ratings of importance than men did to the statements in the Love-Belonging category of Maslow's

Table 6

Participants who Chose Guaranteed Income as a Top Five Motivator by Age Group

Variable		Age Group		Total
		Under 40	40+	
Selected "Guaranteed income" as one of the top five motivators	Yes	5 (5.75%)	5 (21.7%)	10 (9.1%)
	No	82 (94.3%)	18 (78.3%)	100 (90.9%)
	Total	87 (100.0%)	23 (100.0%)	110 (100.0%)

$$\chi^2(1) = 5.63, p = .02$$

hierarchy of needs. The independent variable was gender. The dependent variable was the mean of ratings given to the nine statements in the Love-Belonging category. Results were non-significant, $t(122) = .10$, $p = .92$. Contrary to the hypothesis, men's ratings ($M = 4.1$, $SD = .72$) of statements in the Love-Belonging category were very similar to women's ratings ($M = 4.1$, $SD = .70$).

Another unpaired t-test was performed to determine if women selected Love-Belonging statements in their list of top five motivators more often than did men. The independent variable was gender. The dependent variable used was the number of Love-Belonging statements selected as top five motivators. Results were non-significant, $t(108) = .16$, $p = .88$. Men ($M = .71$, $SD = .78$) included statements in the Love-Belonging category in their lists of top five motivating factors about as often as did women ($M = .69$, $SD = .68$).

In order to test the fifth hypothesis, an unpaired t-test was performed to determine if participants whose primary job focus is computer-related gave higher ratings of importance to statements in the Self-Actualization category than did participants whose primary job focus is not computer-related. The independent variable was primary job focus: participants whose primary job focus was computer-related and participants whose primary job focus were not computer-related. The dependent variable was the mean of the ratings given to the nine statements in the Self-Actualization category. Results were non-significant, $t(121) = .38$, $p = .71$. Participants whose primary job focus is computer-related ($M = 5.0$, $SD = .65$) rated statements in the Self-Actualization category about the

same as did participants whose primary job focus is not computer-related ($\bar{M} = 4.9$, $SD = .68$).

Another unpaired t-test was computed to determine if participants whose primary job focus is computer-related included more statements in the Self-Actualization category in their list of top five motivating factors than did participants whose primary job focus is not computer-related. The independent variable was primary job focus: computer-related or non-computer-related. The dependent variable was the number of statements in the list of top five motivating factors that were in the Self-Actualization category. The unpaired t-test was non-significant, $t(107) = 1.33$, $p = .19$. However, participants whose primary job focus was computer-related ($\bar{M} = 1.8$, $SD = 1.32$) did include slightly more Self-Actualization statements in their list of top five motivating factors than did participants whose primary job focus was not computer-related ($\bar{M} = 1.5$, $SD = 1.28$).

Discussion

The purpose of this study was to determine what motivates employees working in Silicon Valley organizations to do their best work. This section will discuss the findings of the study in more detail, including the comparisons of the findings of this study to the findings of the original study, as well as the implications of these findings, the strengths and limitations of this study and suggestions for future research. It is important to note that although the majority of the findings were not statistically significant, most of the findings were in the expected direction.

Comparison of Past and Current Findings

The overall goal of the study was to compare the workplace motivational needs and values of employees in 1981 and the motivational needs and values of Silicon Valley employees in 1999. This study revealed motivational needs and values of employees produced expected results. Results show while differences between participants in 1981 and participants in 1999 exist, there were also some similar results. This current research, when compared with results of the 1981 study, show statements selected as most motivational have shifted to reflect the changes in the demands on the family environment, while overall motivational statement have remained similar over time.

Research conducted by D. Berry and Abrahamsen in 1981 concluded that employees being trusted to do their jobs and having the ability to "do their own thing" would qualify as a universal motivator in the workplace. This conclusion was developed because their study found that trust was selected by the majority of their study sample as most important in motivating these individuals to do their best work. This study supports that being trusted is an important factor in motivating employees, although it was not selected as the most important motivating factor in the workplace. Results from this study show the statement selected most often as a top five motivator was "Having a job which allows me time with my family." Current theories justify these results due to the shift in quality of life issues; individuals value a balanced life where their family and outside interests are just as important as their jobs (Lankard, 1995).

Implications for these family value findings are valuable to organizations attempting to create motivational programs based on employee values. Taking into

account the desire of employees to have a balance between the time spent on the job and the time spent with the family, organizations can develop programs focusing on these motivational issues. Organizational programs designed to address family issues include flex time and telecommuting; both allow employees flexibility to address family issues when relevant. Additionally, motivational or recognition programs that allow additional time off or a weekend get-away for the entire family would be valued by employees.

In addition to allowing employees flexibility in their job functions, organizations can bring timesaving benefits to the workplace. These could include companies funding timesaving on-site benefits such as dry cleaning, day care, or a coffee shop. Another possibility would be an on-site film developing service, or, as Motorola is currently implementing, an errand-running service (Corbett, 1999). All of these mentioned factors would allow employees to take care of many routine tasks at work, which would allow them additional time to spend with their families.

An interesting result to note is the large difference in percentages of statements selected by salesmen in 1981 and employees in 1999. This finding may be attributed to the fact that in the original study conducted in 1981, participants were asked to list their top 10 motivating statements; this current study asked for participants to list their top 5 motivating statements. Design differences in the study might account for higher percentages of statements selected by the salesmen. Another possibility for the difference in percentages is the nature of the group of participants. The participants in the original study were only salesmen; salesmen are a very homogeneous group, likely to be motivated by the same factors.

Many of the trends seen in the study conducted in 1981 are also seen in the current research. These trends include many statements selected as most motivational falling into the Self-Actualization and Self-Esteem categories. Patterns are consistent in both studies regarding the need for personal growth, challenge, meaningfulness in one's career, along with the need for trust, respect, and recognition from people in the workplace. Overall, when comparing study results from 1981 with current research results, individuals seem to have similar needs and values in keeping motivated to perform their best in the workplace.

What Motivates Silicon Valley Employees?

The first hypothesis, that younger workers will give higher ratings of importance to statements in the Self-Actualization category and will select these statements more often in their list of top five motivating factors than will older workers, was not supported by the findings. While statistically non-significant, those participants younger than age 40 did in fact rate Self-Actualization statements slightly higher than those participants age 40 and over and did select Self-Actualization statements as their top five motivators slightly more often. Although the differences between the groups are not statistically significant, results do support the theory that younger workers are motivated in the workplace more than older workers by factors in Maslow's Self-Actualization category such as personal growth, self-improvement, and job challenge. Results support current theories regarding the younger "Generation Xers"; younger individuals seek work that is purposeful and an environment that is exciting, challenging and meaningful (Nelson, 1999).

One possible reason for the lack of statistically supported results is the fact that participants in both age groups rated the statements in the Self-Actualization category high in importance in motivating them to do their best work. While current research supports younger workers rating Self-Actualization statements high, an unexpected result was the high ratings of Self-Actualization statements by older workers. The older workers ratings may be explained by the dynamic environment created in Silicon Valley, where the majority of workers are motivated by Self-Actualizing factors.

The second hypothesis stated that younger workers will choose the Self-Actualization statement: "Having the personal satisfaction of a job well done" as one of their top five motivating factors more often than will older workers and will give this statement higher ratings of importance. Results did not support this hypothesis. Specifically, participants under the age of 40 did not select "Having the personal satisfaction of a job well done" as one of their top five motivating factors significantly more often than those participants age 40 and over. Nor did younger individuals give personal satisfaction significantly higher ratings of importance than did older workers. In fact, results show that individuals, regardless of age, selected this statement as highly important in motivating them to do their best work.

Again, results show Self-Actualization factors important to both younger and older workers. In this example, personal satisfaction of a job well done showed importance to all age groups as a motivator in the workplace. Although current theories support the concept that younger "Generation Xers" will value and be motivated by Self-Actualization factors more than older workers, the current study does not support this

concept. An explanation for this lack of significant differences between the ratings of motivational factors of younger and older workers may be due to the current dynamic environment in the Silicon Valley; both age groups value Self-Actualization factors as important.

The third hypothesis, that older workers will choose the Safety-Security statement "Having a guaranteed income" as one of their top five motivating factors more often than will younger workers, was supported. Those participants age 40 and over selected guaranteed income as one of the top five most important factors in motivating them to do their best work significantly more often than did participants under the age of 40.

An important organizational implication of this is that it appears older workers are more motivated by having a guaranteed income than are younger workers. These results could potentially have a big effect on company recruitment and recognition and motivational programs. Taking into account the motivating factor of guaranteed income for older workers will enable organizations to structure more successful employee programs. Employee programs that focus on financial incentives such as sign-on, referral, and performance bonuses, company match on 401(k), and expectation of retirement benefits will have a tendency to motivate, satisfy, and retain the older category of workers.

The third hypothesis, when tested to determine if older workers gave higher ratings of importance to the statement "Having guaranteed income" was not supported. Older workers did not give higher ratings than younger workers to guaranteed income. This lack of significance may be due to the small numbers of individuals used in the

sample for this group. Another explanation for the different results when testing the third hypothesis may be due to the fact that while guaranteed income is important for both older and younger employees on an overall basis, it is not one of the five most important motivators for younger workers. Guaranteed income is one of the top five motivators for older workers.

The fourth hypothesis was that women will give higher ratings of importance than will men to the statements in the Love-Belonging category of Maslow's Hierarchy of Needs and will choose more of the Love-Belonging statements in their list of top five motivating factors. Findings did not support this hypothesis. Women did not give higher ratings of importance than did men to statements in the Love-Belonging category. Women also did not select statements in the Love-Belonging category as one of their top five motivators significantly more often than did men. Unlike what was anticipated, the trend showed women and men actually gave similar ratings of importance to statements in the Love-Belonging category. Participants rated factors such as: having a job which allows time with their families, working with other people, and working with people they respect as most important in motivating them to do their best work.

Past articles have shown trends regarding men and women in the workplace. Men, in the past, seem to be motivated by intrinsic work values, such as task significance and task autonomy, while women, on the other hand, have primarily been motivated by social work values, such as supervisory support and co-worker support (Mottaz, 1986). This difference in motivating factors was the expected outcome of this study. A possible explanation as to why a difference between motivators of men and women was not found

in this study could be that the roles of men and women are much more similar today than when earlier research was done. Women are entering the workforce in record numbers. This large segment of women workers creates a need for both men and women to take an active role in the family environment. Men and women have much more similar roles today, especially with the continuing increase of dual-career couples and therefore, the shared family responsibilities.

The fifth hypothesis, that participants whose primary job focus is computer-related will give higher ratings of importance to statements in the Self-Actualization category than will participants whose primary job focus is not computer-related and will choose more of the Self-Actualization statements in their list of top five motivating factors, was not supported. Statistically significant differences between the groups were not found, however, the results did show a pattern of participants whose primary job function was computer-related rating Self-Actualization statements slightly higher and selecting statements in the Self-Actualization category as their top five motivating factors more often than non-computer-related individuals. Participants whose primary job function was computer-related included statements referring to motivating factors such as: being trusted to do their job, having the respect of others, being able to learn and grow in their work, and having the personal satisfaction of a job well done in their top five motivators more often than did non-computer-related participants.

Computer-related professionals are motivated by the opportunity to learn and use new technology skills (Research Institute of America Group, 1998). These individuals enjoy the challenge of cutting-edge technology. Implications for organizations include

the necessity of creating of a challenging environment that utilizes some form of new technology. New technology may be developed into an organization's product line or into an employee's job itself. Practically, if the nature of the business is not utilizing or developing new technology, companies may want to give their employees the opportunity to embrace new technology in their job function.

Implications of This Study

While most of the hypothesis statements were not supported with statistical significance, valuable implications can still be derived from the study. Patterns were identified and will be discussed below.

One implication can be derived from the consistent pattern of results that many participants selected Self-Actualization statements as important motivators. This pattern may be because the Silicon Valley creates an environment of individuals motivated by similar factors. Job challenge, personal satisfaction, self-improvement, personal growth, trust, and respect are all elements important to Silicon Valley workers. A possible explanation for this finding is that Silicon Valley organizations are utilizing those individuals motivated by Self-Actualizing factors; these employees are hoping to better themselves in their workplace environment. The structure of the workforce in Silicon Valley forces organizations to constantly re-evaluate motivational programs to tap into current motivational trends in their workforce. Individuals not motivated by the above mentioned factors may in fact leave the fast-paced Silicon Valley area for a job in a location or company where other motivational factors are most important.

Another implication is based on significant differences identified between older and younger workers regarding guaranteed income. Results supported the theory that employees age 40 and over are motivated significantly more than employees under 40 years of age by having a guaranteed income. One possible explanation is that older workers feel the need to have that security of a guaranteed income; older workers may have many factors related to money they need to be concerned with, including a house and mortgage payment and possibly a family, that depend on a guaranteed monthly income level. Older workers may also be thinking and planning for retirement more than are younger workers.

Another possible explanation for the significant results regarding older and younger workers and guaranteed income may be the workplace focus of these different age groups of workers. Older workers may not thrive as much as younger workers in an environment with constant change and challenge. Older workers may have a tendency to become set in their workplace ways – not wanting the challenge of a constantly changing environment. These older workers value job security and guaranteed income as repayment for their company loyalty (Nelson, 1999). Younger workers, on the other hand, seem to thrive in a challenging work environment where change is the norm (Lankard, 1995). Little faith is placed in job security by younger workers; they tend to “see every job they take as temporary and every company as a stepping stone to something better” (Lankard, 1995, On-line). These younger workers have the tendency to believe that “security comes from the transferability of one’s skills to other jobs rather than from advancement” within organizations (Lankard, 1995, On-line).

These trends regarding guaranteed income relate directly to motivational or recognition programs at the organizational level. Those employees age 40 and over may put more value on additional money incentives such as higher base salary or bonuses, where younger workers may have a tendency to value items other than money incentives, such as recognition, trust, and job challenge. Younger workers want to be valued immediately for their skills (Lankard, 1995).

A third implication is based on the unexpected results of the motivational statements selected in the Love-Belonging category between men and women. Although results lacked statistical significance, the analysis showed that men and women rated Love-Belonging statements about equally. These findings imply that both men and women value elements such as spending time with the family, working with other people, socializing with friends, and participating in work-related social activities. These unanticipated results may be due to the importance placed on family values in the Silicon Valley area. Traditional values in the past have tended to place men in the workplace, taking care of the financial end of the family, and to place women in the home, taking care of the nurturing of the family. Times are different now. Both men and women are in the workforce; dual-career couples have become the norm and not the exception. With this shift in the family expectations, men seem to become more interested in family values and the importance of relationships in the workplace.

Workplace implications include organizations restructuring their motivational programs to take into consideration this current trend. Men value working with teams and people they respect, socializing with friends, and participating in work-related social

activities as much as do women. If organizations can incorporate these elements into their motivational programs, both men and women will be motivated to perform their best work.

With the exception of guaranteed income, there were no other significant differences among study participants in determining what motivates specific groups of individuals to do their best work. The above finding implies that all groups of employees have similar motivating factors, no matter their age, gender, or if their primary job function is computer-related.

Organizations can develop recognition programs and motivational environments that foster challenge and creativity to continue to motivate most of their employees. The implications of this study lead to the belief that most employees are motivated by similar factors; organizations can develop “one size fits all” motivational programs and impact the majority of their workforce. It is important for organizations to understand overall motivation needs and values of their employees in order for them to continue to develop successful recruitment programs; understanding motivational factors of workers will help develop recruitment programs that will identify and hire candidates that will fit into the current culture.

Strengths and Limitations

The main strength of this study is directly related to its design. The purpose of the study was to evaluate what motivates employees in the Silicon Valley; therefore employees from many different organizations within the Silicon Valley participated in this study. The data was derived from a diverse group of individuals working for

different organizations. The study was able to tap into the dynamic pulse of the Silicon Valley workforce.

An additional strength of the study was the consistency of findings over the years when comparing this study with the one conducted in 1981 by D. Berry and Abrahamsen. Analysis of findings revealed similar patterns of motivating factors now and then. As a reminder, the original study found salesmen rated being trusted to do their jobs, the personal satisfaction of a job well done, knowing other people respect their work and being able to learn and grow in their work as most important in motivating them to do their best work. Statements selected as most motivational in 1981 were in the Self-Actualization and Self-Esteem categories, respectively.

The current research study found similar results to that of D. Berry and Abrahamsen. Statements in the Self-Actualization and Self-Esteem categories were rated as the most important motivators, as they were in the original research conducted in 1981. Although the individual statements selected as the highest motivating factors were different, result patterns were very similar.

Implications of the similar results lead the author to theorize that individuals have not changed significantly in the past 18 years regarding motivational needs and values. What motivated individuals to do their best work in 1981 is similar to what motivates individuals in 1999. Over the years, individuals are motivated primarily by the same factors; job challenge, personal satisfaction, self improvement, and personal growth are factors that did and continue to motivate individuals in the workplace.

The limitations of this study must also be taken into consideration. The most important limitation is the size of the study sample. The sample size was small, which led to small numbers in many of the groups being analyzed. In addition to the number of participants being a limitation, it is possible that the participants may not be a representative sample of the larger population of workers in the Silicon Valley because all participants were volleyball players. Future research is recommended to conduct a study that includes a larger sample size, which may yield a higher number of significant results than this study. A larger sample size will increase the probability that participants will be more diverse and may be more representative of the general population.

Another limitation of the study may be the tool used to measure motivation in the workplace. The survey used asked employees to rate 45 statements on the extent the individual statements motivate them to do their best work. Because there were no additional spaces for participants to write in their own motivators, it is difficult to conclude that the items listed addressed all the viable alternatives that actually motivate employees. In other words, there may be other motivating factors that were not addressed on the survey used for this study.

One additional limitation may have occurred in the data collection process. Surveys were completed at an evening volleyball league. While there was a representative sample of diverse individuals present, all of these volleyball players may have similar motivational factors. Because they were surveyed at a mutually-enjoyed sporting activity, they may have many mutually-shared motivational factors. Also, it may have been difficult for some participants to completely and accurately rate

statements that motivate them to do well at work while they were participating in an enjoyable, after-work activity. It is possible that results may be more significant if participants are requested to complete the survey in a location other than a volleyball league.

Future Research

Regarding future research, the author suggests the analysis of additional factors. This research analyzed motivational differences in age, gender, and occupation in relation to those participants whose primary job function was computer-related and those participants whose primary job function was not computer-related. Additional research could be valuable if different age categories or different occupations were analyzed. Ethnic backgrounds would be an additional element to consider analyzing. The Silicon Valley area of Northern California has many different ethnic backgrounds in the workforce; this ethnic diversity has the potential to create diverse motivational needs and values.

Another interesting element to research in the future would be to determine if there are any significant differences between combined groups. For example, combining the age and gender categories to determine if there are significant differences between men under the age of 40 when compared with women under the age of 40 may yield significant results.

Yet another suggestion for future research is to analyze the lack of anticipated differences between men and women in regards to the Love-Belonging statements. Research to further investigate the reason men selected statements in the Love-Belonging

category at a similar rate as women is warranted. Future research may include studies both to further identify trends in selection of statements in the Love-Belonging category, and to attempt to determine the reason behind the similar motivational needs of men and women regarding the Love Belonging statements.

An important issue to address is the changing roles of men and women in the family environment. These changes in the family roles have the potential to directly impact the changing roles of men and women in the workplace environment. Additional research may address and identify the changing roles of men and women in the workplace environment, allowing employers to adapt their motivational programs to address the changing needs and values of their employees.

It may also be valuable to conduct this same study in a different part of the United States. The workplace environment in the Silicon Valley is one that is unique; the cutting-edge environment in the Silicon Valley creates a host of unique employee needs and values. Different locations in the United States may yield different results regarding the workplace motivations of individuals.

Yet another suggestion for future research is to investigate motivational differences between individuals with differences in salary or responsibility levels. An interesting question might also be to determine if level of education has an impact on which motivational factors are rated the highest.

Conclusions

Identifying motivational factors of modern-day workers in the Silicon Valley will make great strides in identifying key needs and values of these individuals. Once these

factors are identified, employers can structure motivational, recognition, and recruitment programs around the results, creating a work environment where employee satisfaction is optimized. In turn, organizations should see an increase in productivity and retention and a reduction in employee turnover.

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Appendix A



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September 15, 1999

Dear friend,

You are being invited to participate in a research survey to examine the motivational needs of employees in Silicon Valley. The purpose of this study is to gain a better understanding about people's needs and values as related to motivation in the work environment. I am asking you to provide this information by completing a short questionnaire where you indicate the motivational value of a series of short statements, as well as provide some background information about yourself. This questionnaire should take about 10 minutes to complete.

Please be assured that your participation in this study is completely voluntary. You may refuse to participate in the study or in any part of the study. You are also free to withdraw from the study at any time without prejudice to your relations with San Jose State University or any other participating institutions. If you do choose to participate, your personal identity will remain completely anonymous - no-one will be able to link you to your responses. Also, the information you provide will remain totally confidential, as I will be the only individual to have access to the information.

If you have any questions about the project, you may discuss them with me prior to or after filling out the research survey. If you choose to participate, please return your survey to me; keep this letter for your records. If you have any other questions or concerns about any aspect of the research project, please contact Kris Germone at (408) 360-2297 or Dr. Robert Cooper, SJSU Psychology Department Chair, at (408) 924-5600. Questions about research, subjects' rights, or research-related injury may be presented to Nabil Ibrahim, PhD, AVP of Graduate Studies and Research at (408) 924-2480. I hope to have the results of the study completed in approximately 45 days. If you wish to learn more about the findings of the study, please contact Kris Germone at that time.

Thank you in advance for your assistance with this study.

Sincerely,

Kris Germone

The California State University:
Chancellor's Office
Sacramento Chico Dominguez Hall
Fresno Fulton Heyward Humboldt
Long Beach Los Angeles Maritime Academy
Monterey Bay Northridge Pomona
Sacramento San Bernardino San Diego
San Francisco San Jose San Luis Obispo
San Marcos Sonoma Stanislaus

Appendix A (con't)

Study of Motivational Needs

Please complete the following exercise and demographic information. The information will remain anonymous and confidential. This information is requested and will be analyzed as part of a research project. Your assistance is greatly appreciated.

Listed below are factors that may contribute to motivating you to perform your best in the work place environment. *Using the six-point scale below, please indicate how important each of these factors is in motivating you to do your best work by circling the appropriate number. Please do not leave any statements blank. Select just one number for each statement.*

	Not at all Important 1	Slightly Important 2	Somewhat Important 3	Moderately Important 4	Very Important 5	Extremely Important 6
1. Job security	1	2	3	4	5	6
2. Being trusted to do my job the way I think it should be done.....	1	2	3	4	5	6
3. Participating in work group conversations.....	1	2	3	4	5	6
4. Being able to afford a place to live.....	1	2	3	4	5	6
5. Having a job which allows me time with my family.....	1	2	3	4	5	6
6. Having an opportunity for personal growth.....	1	2	3	4	5	6
7. Socializing with my friends.....	1	2	3	4	5	6
8. Being considered for advancement	1	2	3	4	5	6
9. Working with other people.....	1	2	3	4	5	6
10. Being able to support children I have and/or may have in the future.....	1	2	3	4	5	6
11. Doing something meaningful with my life.....	1	2	3	4	5	6
12. Being in a position to contribute new ideas.....	1	2	3	4	5	6
13. Having co-workers look out for my interests.....	1	2	3	4	5	6
14. Involving other people in what I do.....	1	2	3	4	5	6
15. Being rewarded for my performance.....	1	2	3	4	5	6
16. Being involved with co-workers in social and recreational activities..	1	2	3	4	5	6
17. Developing and/or maintaining romantic relationships.....	1	2	3	4	5	6
18. Having a superior tell me when I've done a good job.....	1	2	3	4	5	6
19. Having opportunities to participate in work-related social activities.....	1	2	3	4	5	6
20. Having other people respect me and my work.....	1	2	3	4	5	6
21. Being accepted as a work group or team.....	1	2	3	4	5	6
22. Having insurance or other benefits.....	1	2	3	4	5	6
23. Having others recognize the importance of my job.....	1	2	3	4	5	6

Appendix A (con't)

	Not at all Important 1	Slightly Important 2	Somewhat Important 3	Moderately Important 4	Very Important 5	Extremely Important 6
24. Having new and exciting job challenges.....	1	2	3	4	5	6
25. Having money to buy enough food to eat each day.....	1	2	3	4	5	6
26. Not having to be accountable to other people.....	1	2	3	4	5	6
27. Being able to avoid working overtime or on weekends.....	1	2	3	4	5	6
28. Having steady work.....	1	2	3	4	5	6
29. Being able to express my full potential.....	1	2	3	4	5	6
30. Knowing that I will always have a job.....	1	2	3	4	5	6
31. Being able to take breaks and have food available.....	1	2	3	4	5	6
32. Having a healthful working environment.....	1	2	3	4	5	6
33. Being given new, interesting job assignments.....	1	2	3	4	5	6
34. Having the opportunity for self-improvement.....	1	2	3	4	5	6
35. Having protection from personal danger.....	1	2	3	4	5	6
36. Being able to learn and grow in my work.....	1	2	3	4	5	6
37. Having personal comfort in my working environment.....	1	2	3	4	5	6
38. Knowing what is expected of me in my work.....	1	2	3	4	5	6
39. Having the opportunity to express myself fully and creatively.....	1	2	3	4	5	6
40. Being treated fairly by other people.....	1	2	3	4	5	6
41. Working with people I like and respect.....	1	2	3	4	5	6
42. Having a position of authority.....	1	2	3	4	5	6
43. Having a guaranteed income.....	1	2	3	4	5	6
44. Having the personal satisfaction of a job well done.	1	2	3	4	5	6
45. Being able to afford decent clothing.....	1	2	3	4	5	6

Looking at your ratings for the above statements, which five statements are most important in motivating you to do your best work? Write the numbers of these five statements in the spaces below:

Appendix A (con't)

The following is a series of questions about yourself and your background. Read each question and mark or write the appropriate response. Please answer each question to the best of your ability.

1. What is your gender? ☐ Male ☐ Female

2. What is your age?

3. What is the highest level of education you have completed?

☐ High school

☐ Some graduate study

☐ Some college

☐ Master's degree graduate

☐ College graduate - Associate's Degree

☐ PhD/Doctorate

☐ College graduate - Bachelor's Degree

☐ Other

4. What is your ethnic background?

☐ African American

☐ Native American

☐ Asian/Asian American

☐ Pacific Islander

☐ Caucasian

☐ Hispanic

☐ Middle Eastern

☐ Other

☐ Mexican American

5. What is your occupation?

6. What is your occupational category?

☐ Administrative Specializations: Accountant, Purchasing, Human Resources, etc.

☐ Agriculture, Fishery, & Forestry

☐ Mathematics and Physical, Life or Social Science

☐ Architecture, Engineering & Surveying

☐ Medicine and Health

☐ Clerical

☐ Processing

☐ Computer-Related (Information Technology)

☐ Religion and Theology

☐ Education

☐ Sales

☐ Entertainment and Recreation

☐ Service

☐ Law and Jurisprudence

☐ Structural Work

☐ Machine Trades

☐ Other

7. Are you an Information Technology professional? ☐ Yes ☐ No

8. How long have you worked at your current company?

☐ Less than 1 year

☐ 4 to 6 years

☐ 1 to 2 years

☐ 6 to 8 years

☐ 2 to 3 years

☐ 8 to 10 years

☐ 3 to 4 years

☐ Over 10 years

THANK YOU FOR YOUR TIME AND ASSISTANCE!


Appendix B



San José State
UNIVERSITY

Office of the Academic
Vice President
Associate Vice President
Graduate Studies and Research
One Washington Square
San Jose, CA 95132-0025
Voice: 408-924-2480
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TO: Kristine Germone
1821 Parkview Green Circle
San Jose, CA 95131

FROM: Nabil Ibrahim, 
AVP, Graduate Studies & Research

DATE: September 21, 1999

The Human Subjects-Institutional Review Board has approved
your request to use human subjects in the study entitled:

"Motivational Needs of Silicon Valley
Employees"

This approval is contingent upon the subjects participating in
your research project being appropriately protected from risk.
This includes the protection of the anonymity of the subjects'
identity when they participate in your research project, and
with regard to any and all data that may be collected from the
subjects. The Board's approval includes continued monitoring
of your research by the Board to assure that the subjects are
being adequately and properly protected from such risks. If at
any time a subject becomes injured or complains of injury, you
must notify Nabil Ibrahim, Ph.D., immediately. Injury includes
but is not limited to bodily harm, psychological trauma and
release of potentially damaging personal information.

Please also be advised that all subjects need to be fully
informed and aware that their participation in your research
project is voluntary, and that he or she may withdraw from the
project at any time. Further, a subject's participation, refusal to
participate, or withdrawal will not affect any services the
subject is receiving or will receive at the institution in which
the research is being conducted.

If you have any questions, please contact me at
(408) 924-2480.

The California State University:
Thousand Oaks
Bakersfield, Chico, Dominguez Hills,
Fresno, Fullerton, Hayward, Humboldt,
Long Beach, Los Angeles, Maritime Academy,
Monterey Bay, Northridge, Pomona,
Sacramento, San Bernardino, San Diego,
San Francisco, San Jose, San Luis Obispo,
San Marcos, Stanislaus, Stanislaus